

REMARKS

Claims 1-12 and 16-22 are now presented for examination, of which Claims 1, 8, 9, 16, 18 and 19 are independent claims. Claims 9 and 18 have been amended in response to the Examiner's objection to the wording of those claims. In addition, a purely formal change has been made to Claim 1, and changes as described below have been made to Claims 16 and 18, which are not believed to affect the allowability of those claims. Claims 19-22 have been added. Favorable reconsideration is respectfully requested.

Applicants note with appreciation the withdrawal of the restriction requirement and the allowance of Claims 16-18. Those claims have been amended to provide better antecedent basis, and by deleting "standard" from line 6 of each. The latter change is made because according to the aspects of the invention to which these claims are directed, it is not necessary that the white point used be a standard one, and in fact an arbitrary one can be used. These changes as stated are not believed to affect the allowability of these claims.

Newly added independent Claim 19 is an apparatus claim corresponding to method Claim 16, as amended. Newly added Claims 20-22 depend from Claims 16, 18 and 19, respectively, and specify that the white point used is a standard white point. Claims 19-22 are believed also to be in condition for allowance.

Claims 1-12 were rejected under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent No. 5,446,476 (Kouzaki). After a thorough review and consideration of the prior art and the reasoning set forth in support of this rejection in the Office Action, Applicant finds that he cannot agree that the rejection is proper, for at least the following reasons. Accordingly, no changes have been made to the claims except as to the objection to Claims 9 and 18, noted above.

Independent Claim 1 recites, among other features, “correcting the input color image signal according to an observation condition to produce a corrected input color image signal; and *converting, after said correcting step, the corrected input color image signal produced in the correcting step* into an achromatic color image signal when it is determined in said determining step that the input color image signal represents achromatic color [emphasis added]”. Applicant submits that in fact nothing has been found, or pointed out, in *Kouzaki* that teaches, or even hints at, the recited converting step.

The *Kouzaki* apparatus was thoroughly discussed in Applicant’s last Amendment, and it is not deemed necessary to repeat that discussion in full. Applicant notes that the Office Action, for the correcting and converting steps of Claim 1, relies on elements 96 and 84 shown in Fig. 10, and on the accompanying portions of the specification. The description in *Kouzaki* of the processing performed by those elements is as follows:

“Further, as shown in FIG. 10, the adjustment of image data to the lighting condition may be made in the black generating section 84. Generally, in forming a full color image from four colors of yellow (Y), magenta (M), cyan (C) and black (Bk), a high density region is reproduced by using Bk as well as Y, M and C. Originally, any color can be made from three colors of Y, M and C. However, in order to improve the reproductivity of a high density region, the amounts of Y toner, M toner and C toner are reduced by under color removal (UCR) and Bk toner is added.” *Kouzaki*, col 6, lines 6-16.

Applicant understands this to say, first, that the adjustment for observation conditions can be performed in the black-generating section 84, instead of in shading-correction 82, as described at col. 5, lines 10-50, or density converting section 83, as described at col. 5, line 51, through col. 6, line 5, and second, that the well-known technique of undercolor removal (“UCR”) is used to improve reproducibility in high-density regions. *Kouzaki* continues:

“The ratio of the total amount of reduced Y, M and C toners (UCR) to the amount of added Bk toner (BP) influences the chromaticity of the reproduced image as shown in FIG. 11. In making the adjustment in the black generating section 84, the relation between the ratio of UCR to BP and the chromaticity of the reproduced image as shown by FIG. 11 must be considered.” *Kouzaki*, col. 6, lines 16-23.

This portion is understood to mean simply that the ratio of UCR to the amount of black toner added in lieu of the removed color toners, itself has an effect on the perceived chromaticity; in order to achieve high-quality image correction, this effect must be taken into account. The description continues:

“In a judging section 95, judgment of an achromatic color or a chromatic color is made from the data (R, G, B) obtained after the shading correction, and the chromaticity is corrected by UCR/BP correction data stored in a UCR/BP control ROM 96. The UCR/BP correction data are practically curves C_1 , C_2 and other curves converted from a standard UCR/BP (%) characteristic curve C . With a correction in accordance with the curve C_1 , the reproduced color shifts to a chromatic side, and with a correction in accordance with the curve C_2 , the reproduced color shifts to an achromatic side.

Further, in this embodiment, another judging section 97 is provided. The judging section 97 judges the chromaticity from the data (R, G, B) obtained after the shading correction, and in the black generating section 84, the chromaticity is corrected by UCR/BP correction data stored in a UCR/BP control ROM 98. The correction data stored in the ROM 98 are practically a curve D_1 (see FIG. 13a) to make reddish colors clearer than a standard characteristic curve D , a curve D_2 (see FIG. 13b) to make greenish and bluish colors clearer, and other characteristic curves.

The UCR/BP control ROMs 96 and 98 are also stored with adjustment data which adjust the UCR/BP characteristic curves to the respective lighting conditions. The ROM 96 and the ROM 98 are switched for use by a selector 94 which is controlled by the controller 91.” *Kouzaki*, col. 6, lines 23-52.

Noteworthy in this portion of *Kouzaki*, is what is *not* said: nothing in this description of elements 84, 95 and 96 says that the operation of these (or any other portions of the *Kouzaki* apparatus) ever perform a conversion of a signal such as to make the image

achromatic. Exactly what elements 95 and 96 cause circuit 84 to do is not set out entirely explicitly in this description, as the quoted text merely says that the UCR/BP ratio may be adjusted as part of the adjustment of the image data to the lighting conditions. There is no teaching of any kind in *Kouzaki* that any image data is ever made achromatic, let alone that image data is made achromatic based on a determination made by circuit 95.

Nor would it be proper for the Examiner to consider the claimed conversion as somehow being inherent in the *Kouzaki* disclosure. As far as can be determined from the quoted description, it appears that chromatic image data is subjected to adjustment in accordance with a suitable curve based on curve C (such as the two illustrated curves C_1 and C_2 , although *Kouzaki* makes clear that these two are not the only curves that can be used for this adjustment; col. 6, lines 28-30). Thus, there is no basis on which one could assert that such processing is inherent in the operation of *Kouzaki*'s apparatus, since it plainly is not inherent, and there is certainly no clear teaching that the *Kouzaki* apparatus performs the conversion step recited in Claim 1.

What *is* clear from *Kouzaki*, however, is that the adjustment of the image data to the lighting condition is performed by the operation of circuit 84. The function of circuit 96, which is a ROM, is simply to store the correction curves used by circuit 84 in the process of making that adjustment. Col. 6, lines 6-8 and 28-34. Nothing has been found, or cited in the outstanding Office Action, that would teach or suggest that circuit 84, or any other portion of the *Kouzaki* apparatus, performs a correction step according to an observation condition to produce a corrected input color image signal, and then performs a conversion step to ensure that the corrected data is achromatic if the original data is achromatic, as recited in Claim 1. Thus, even if circuit 84 arguably made image data achromatic under some circumstances (and Applicant believes strongly, for the reasons set out above, that there is no hint in *Kouzaki* that such is the

case), nothing in that patent teaches or suggests that a correction is performed according to lighting conditions, and that then the corrected signal is further subjected to a conversion to make it achromatic where the input image signal is achromatic.

For all these reasons, Applicant submits that Claim 1 is allowable over *Kouzaki*.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other rejected claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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